PROTOTYPE OF AN INTERNET OF THINGS-BASED CIGARETTE SMOKE FILTER CONTROL DEVICE IN AN AIR-CONDITIONED SMOKING ROOM IN A COFFEE SHOP

Iswansyah
Computer Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : swansyah50@gmail.com

ABSTRACT

Cigarette smoke in air-conditioned spaces, such as smoking rooms in coffee shops, can degrade air quality and disrupt customer comfort. This research aims to design and implement a prototype Internet of Things (IoT)-based cigarette smoke filter control device capable of automatically monitoring and controlling air quality. This system uses an MQ-7 sensor to detect carbon monoxide from cigarette smoke and a DHT22 sensor to measure room temperature and humidity. An ESP32 microcontroller serves as the main control unit, connected to the Blynk and Telegram applications for remote monitoring and notification. Testing demonstrated that the system can respond automatically when smoke levels exceed a threshold by turning on a DC fan to remove the smoke. The system can also send real-time notifications to Telegram and display data visually in Blynk. These results demonstrate that the prototype can function effectively as an indoor air quality monitor.

Keywords*: Cigarette Smoke, Blynk, ESP32, IoT, MQ-7, Telegram.*